

In The Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

1-10 (Cancelled)

11. (New) An electrochemical cell for electrolysis of an aqueous solution of hydrogen chloride comprising:

- a) an anode half-cell comprising an anode,
- b) a cathode half-cell comprising a gas diffusion electrode as the cathode,

and

- c) an ion exchange resin comprising a perfluorosulfonic acid polymer which is positioned between a) and b)

in which a surface of the gas diffusion electrode and a surface of the perfluorosulfonic acid polymer are adjacent to each other and those adjacent surfaces are smooth.

12. (New) An electrochemical cell for electrolysis of an aqueous solution of hydrogen chloride comprising:

- a) an anode half-cell comprising an anode,
- b) a cathode half-cell comprising a gas diffusion electrode as the cathode,

and

- c) an ion exchange resin comprising a perfluorosulfonic acid polymer which is positioned between a) and b)

in which (i) a surface of the gas diffusion electrode and a surface of the perfluorosulfonic acid polymer are adjacent to each other and (ii) under a pressure of 250 g/cm^2 and a temperature of 60°C , the gas diffusion electrode and the ion exchange membrane have a contact area of at least 50% of their geometric area.

13. (New) The electrochemical cell of Claim 12 in which the contact area of the gas diffusion electrode and ion exchange membrane is at least 70%.

14. (New) The electrochemical cell of Claim 11 in which the ion exchange membrane comprises one layer of a perfluorosulfonic acid polymer in which a support is embedded.

15. (New) The electrochemical cell of Claim 12 in which the ion exchange membrane comprises one layer of a perfluorosulfonic acid polymer in which a support is embedded.

16. (New) The electrochemical cell of Claim 13 in which the ion exchange membrane comprises one layer of a perfluorosulfonic acid polymer in which a support is embedded.

17. (New) The electrochemical cell of Claim 11 in which the ion exchange membrane comprises at least two layers of perfluorosulfonic acid polymer and a support member is embedded between the two layers or in at least one of the layers.

18. (New) The electrochemical cell of Claim 12 in which the ion exchange membrane comprises at least two layers of perfluorosulfonic acid polymer and a support member is embedded between the two layers or in at least one of the layers.

19. (New) The electrochemical cell of Claim 13 in which the ion exchange membrane comprises at least two layers of perfluorosulfonic acid polymer and a support member is embedded between the two layers or in at least one of the layers.

20. (New) The electrochemical cell of Claim 17 in which the two layers of perfluorosulfonic acid polymer have different equivalent weights.
21. (New) The electrochemical cell of Claim 18 in which the two layers of perfluorosulfonic acid polymer have different equivalent weights.
22. (New) The electrochemical cell of Claim 19 in which the two layers of perfluorosulfonic acid polymer have different equivalent weights.
23. (New) The electrochemical cell of Claim 11 in which the perfluorosulfonic acid polymer has an equivalent weight of from 600 to 2500.
24. (New) The electrochemical cell of Claim 12 in which the perfluorosulfonic acid polymer has an equivalent weight of from 600 to 2500.
25. (New) The electrochemical cell of Claim 13 in which the perfluorosulfonic acid polymer has an equivalent weight of from 600 to 2500.
26. (New) The electrochemical cell of Claim 11 in which the perfluorosulfonic acid polymer has an equivalent weight of from 900 to 2000.
27. (New) The electrochemical cell of Claim 12 in which the perfluorosulfonic acid polymer has an equivalent weight of from 900 to 2000.
28. (New) The electrochemical cell of Claim 17 in which the perfluorosulfonic acid layer with one of its surfaces facing the gas diffusion electrode has a higher equivalent weight than any other perfluorosulfonic acid layer.
29. (New) The electrochemical cell of Claim 18 in which the perfluorosulfonic acid layer with one of its surfaces facing the gas diffusion electrode has a higher equivalent weight than any other perfluorosulfonic acid layer.

30. (New) The electrochemical cell of Claim 11 in which a catalyst layer for the gas diffusion electrode is applied to the ion exchange membrane.

31. (New) The electrochemical cell of Claim 12 in which a catalyst layer for the gas diffusion electrode is applied to the ion exchange membrane.

32. (New) The electrochemical cell of Claim 11 in which the ion exchange membrane has a support structure comprising a gauze, woven fabric, braided fabric, knit fabric, non-woven material, plastic foam or elastically deformable material.

33. (New) The electrochemical cell of Claim 12 in which the ion exchange membrane has a support structure comprising a gauze, woven fabric, braided fabric, knit fabric, non-woven material, plastic foam or elastically deformable material.

34. (New) The electrochemical cell of Claim 11 in which the ion exchange membrane has a support structure comprising metal, plastic, carbon fibers or glass fibers.

35. (New) The electrochemical cell of Claim 11 in which the ion exchange membrane has a support structure comprising metal, plastic, carbon fibers or glass fibers.